Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application.

Listing of the Claims:

1.-8.   (Withdrawn)

9.   (Currently Amended) The <u>single continuous</u> cable of claim [[30]] 38 wherein the printer controller comprises:

    ~~a) a random access memory for storing a non-resident printer controller program;~~

    [[b)]] a processor for executing computer programs coupled to the ~~random access~~ <u>volatile</u> memory; and

    [[c)]] a dynamic loading program for <u>causing the processor to</u> automatically <u>manage</u> ~~managing the~~ download of the ~~non-resident~~ printer controller program <u>from a source</u> to the ~~random access~~ <u>volatile</u> memory ~~and for automatically determining whether the printer controller program is compatible with the print engine and the printer controller;~~

    ~~d) a print controller ready data interface for receiving print controller ready data (PCRD) from the source;~~

    ~~e) a print engine ready data interface for providing print engine ready data (PERD) to the printer;~~

    ~~wherein the printer controller receives the print controller ready data and based thereon generates print engine ready data.~~

10.   (Currently Amended) The <u>single continuous</u> cable of claim 9 wherein the dynamic loading program~~, when executing on the processor,~~ <u>determines whether a current version of the printer controller program resident in the volatile memory is not valid, and</u> selectively downloads from <u>a host computer</u> ~~the source~~ the ~~non-resident~~ printer

controller program to the volatile memory of the printer controller ~~when it is determined that~~ if the current version of the printer controller program ~~resident in the random access memory~~ is not valid.

11.   (Canceled)

12.   (Currently Amended) The single continuous cable of claim 10 wherein the printer controller program, when executing on the processor, receives the print controller ready data and based thereon generates the print engine ready data for controlling a print engine.

13.   (Currently Amended) The single continuous cable of claim 9 further comprising:

an integrity check module, when executing on the processor, for performing an integrity check on the printer controller program to determine whether the printer controller program is ~~valid,~~ corrupted and re-installing the printer controller program ~~from the source~~ when the printer controller program is ~~not valid~~ corrupted~~, performing compatibility tests to determine whether the printer controller program is compatible with the printer controller and a printing software, re-installing the printer controller program from the source when the printer controller program not compatible with the printer controller and the printing software~~.

14.   (Currently Amended) The single continuous cable of claim 9 wherein the printer controller is embodied in one of a single integrated circuit and an application specific integrated circuit (ASIC).

15.-20. (Canceled)

21.-29. (Withdrawn)

30.   (Currently Amended) A single continuous cable comprising:

a first connector having a print controller ready data interface for receiving print controller ready data ~~(PRCD)~~;

a second connector having a print engine ready data interface for providing print

engine ready data (PERD); and

a printer controller disposed within the single continuous cable, the printer

controller connected to the first connector and the second connector internal to the cable,

the printer controller configured to receive for receiving the print controller ready data

from the print controller ready data interface and based thereon for generating to generate

print engine ready data for transmission to the print engine ready data interface.

31.   (Currently Amended) The single continuous cable of claim 30 further comprising:

a cable format conversion mechanism for converting signals in a first format into

corresponding signals in a second format, the cable format conversion mechanism within

the single continuous cable.

32.   (Currently Amended) The single continuous cable of claim 30 further comprising:

a multiple target device support mechanism for supporting at least two different

types of target devices, the multiple target device support mechanism within the single

continuous cable.

33.   (Currently Amended) The single continuous cable of claim 32 wherein the

multiple target device support mechanism further comprises[[.]]:

a laser printer interface for providing an interface to a laser printers;

a non-impact printer interface for providing an interface to a non-impact ink

printers; and

a common formatting circuit coupled to the laser printer interface and the non-

impact printer interface for providing functions to the laser printer interface and the non-

impact printer interface.

34.   (Canceled)

35.   (Canceled)

36.   (Currently Amended) The single continuous cable of claim 30 wherein the print controller ready data interface includes comprises one of an industry standard computer port interface, a parallel port interface, a serial port interface, IEEE 1284 parallel port interface, a USB serial port interface, and an Ethernet interface.

37.   (Currently Amended) The single continuous cable of claim 30 wherein the print engine ready data (PERD) interface includes comprises one of a parallel port interface, a serial port interface, an IEEE 1284 parallel port interface, a USB serial port interface, an Ethernet interface, and a custom interface.

38.   (New) The single continuous cable of claim 30 wherein the printer controller comprises a printer controller program for generating the print engine ready data, the printer controller program stored in a memory consisting of volatile memory.

39.   (New) The single continuous cable of claim 30 wherein the printer controller is configured to send commands to a print engine, to receive a status signal from the print engine in response to the commands sent, and to transfer the print engine read data to the print engine after receiving the status signal.

40.   (New) A single continuous cable comprising:

means for interfacing with a host computer to receive print controller ready data;

means disposed within the single continuous cable for generating print engine ready data from the print controller ready data; and

means for providing the print engine ready data to a printing device.

41.   (New) The cable of claim 40 further comprising:

means for storing in a volatile memory a printer controller program that generates the print engine ready data from the print controller ready data; and

means for automatically managing download of the printer controller program to the volatile memory.

42.   (New) The cable of claim 41 wherein the means for automatically managing

download determines whether a current version of the printer controller program resident

in the volatile memory is not valid or non-existent, and downloads the printer controller

program to the volatile memory of the printer controller if the current version of the

printer controller program is not valid or non-existent.